3.8 AGRICULTURAL LANDS

Agricultural lands considered in this environmental document are those included in the State of California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP). (Government Code § 65570) FMMP-listed agricultural resource categories include prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance. This section generally describes the existing farmland locations and agricultural resources in the five project regions, and identifies potential impacts related to converting farmland to non-agricultural use for each alternative and high-speed train (HST) option. Severance of farmland, insofar as it is a potential impact on a working landscape, is also discussed in this section.

3.8.1 Regulatory Requirements and Methods of Evaluation

A. REGULATORY PROVISIONS

Many regulatory and non-regulatory strategies are used to discourage farmland conversion (i.e., the conversion of land in agricultural use to non-agricultural use). In addition, there are many non-regulatory strategies used to prevent farmland conversion. CEQA provides that significant effects on the environment of agricultural land conversions be considered in the environmental review process (P.R.C. § 21060.1 and CEQA Guideline § 21095[a]).

Farmland Mapping and Monitoring Program

FMMP is the only statewide land use inventory conducted on a regular basis. California Department of Conservation administers the FMMP, under which it maintains an automated map and database system to record changes in the use of agricultural lands. Farmland under the FMMP is listed by category—prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance. Information regarding locations of farmland by category is readily available. Conversely, farmland sought to be protected by various other strategies, some of which are discussed below, can be more difficult to identify because they are listed and administered locally, and may use different criteria. Because of these considerations, this document uses only the FMMP-protected farmland categories for estimating potential impacts on farmland. The farmland categories listed under the FMMP are described below. The categories are defined pursuant to U.S. Department of Agriculture (USDA) land inventory and monitoring criteria, as modified for California.

- Prime Farmland. Prime farmland is land with the best combination of physical and chemical features to sustain long-term production of agricultural crops. These lands have the soil quality, growing season, and moisture supply necessary to produce sustained high yields. Soil must meet the physical and chemical criteria determined by the USDA's Natural Resources Conservation Service (NCRS). Prime farmland must have been used for production of irrigated crops at some time during the 4 years prior to the mapping date by the FMMP.
- Farmland of Statewide Importance. Farmland of statewide importance is similar to prime farmland but with minor differences, such as greater slopes or a lesser ability of the soil to store moisture. Farmland of statewide importance must have been used for production of irrigated crops at some time during the four years prior to the mapping date.
- Unique Farmland. Unique farmland is of lesser quality soils than prime farmland or farmland of statewide importance. Unique farmland is used for the production of the state's leading agricultural crops. These lands are usually irrigated but may include non-irrigated orchards or vineyards found in some climatic zones in California. Unique farmland must have been used for crops at some time during the four years prior to the mapping date.

- Farmland of Local Importance. Farmland of local importance is farmland that is important to the local agricultural community as determined by each county's board of supervisors and local advisory committees.

Federal Farmland Protection Policy Act

The USDA's NRCS oversees the Farmland Protection Policy Act (FPPA) (7 U.S.C. § 4201 *et seq.*; see also 7 C.F.R. part 658). The FPPA (a subtitle of the 1981 Farm Bill) is national legislation designed to protect farmland. The FPPA states its purpose is to "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." The FPPA applies to projects and programs that are sponsored or financed in whole or in part by the federal government. The FPPA does not apply to private construction projects subject to federal permitting and licensing, projects planned and completed without any assistance from a federal agency, federal projects related to national defense during a national emergency, or projects proposed on land already committed to urban development. The FPPA spells out requirements to ensure federal programs to the extent practical are compatible with state, local, and private programs and policies to protect farmland, and calls for the use of the Land Evaluation and Site Assessment (LESA) system to aid in analysis. Because the proposed HST Alternative may ultimately seek some federal funding, the FPPA is considered in this document.

Williamson Act

The California Land Conservation Act (Government Code § 51220 *et seq.*), commonly known as the Williamson Act, provides a tax incentive for the voluntary retention of lands in certain open space and agricultural uses pursuant to contracts between local government and landowners for lands located within agricultural preserves designated by local government ordinances. The contract restricts the uses of the land to those compatible with agriculture, wildlife habitat, scenic corridors, recreational uses, or open space, as defined in local ordinances. Local government calculates the property tax assessment based on the actual use of the land instead of the potential land value assuming full development.

To be eligible for a Williamson Act contract, the land must be designated by a city or county as agricultural preserve, scenic highway corridor, wildlife habitat area, or open space area. Lands under Williamson Act contracts are subject to development constraints. During the contract term and non-renewal period, the use of property subject to a Williamson Act contract must adhere to standards of compatibility with agriculture. Williamson Act contracts are for 10 years and longer. After the first year of the 10-year period, one more year is added to the term of the contract and so on each time a year elapses, so that the contract is always valid for a 10-year period. A Williamson Act contract will continue indefinitely, unless the property owner files a notice of non-renewal on the contract. Should that occur, the Williamson Act contract would cease 10 years after the filing of the notice of non-renewal.

Conservation Easements

Conservation easements are voluntary limitations placed generally on deeds, the purpose of which is to retain land in its natural, open-space, or agricultural condition, and are entered into for the preservation of agricultural or other natural or open space lands. They allow the land to be farmed and owned by the farmer, but do not allow the land to be developed for urban uses. An easement may be granted under the California Farmland Conservancy Program (Government Code § 10200 *et seq.*) from a landowner to a local government, a nonprofit organization, or other qualifying entity. Easements may also be granted pursuant to provisions of the Civil Code (§ 815 *et seq.*).

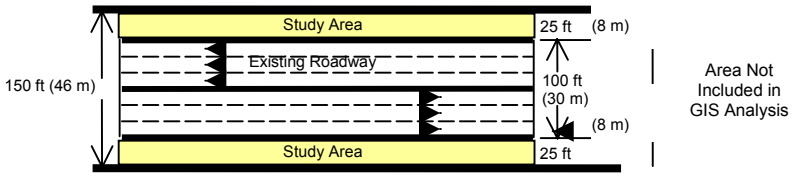
B. METHOD OF EVALUATION OF IMPACTS

Method of Determining Study Areas

Modal Alternative: It was assumed that all existing roadways potentially affected by the Modal Alternative have an average right-of-way width of 100 ft (30 m). This assumption was verified by aerial photographic analysis of the roadways that exist in agricultural areas that would be improved under the Modal Alternative. All roadway segments in the aerial photos that exceed the 100-ft (30-m) width assumption were observed to either have sufficient space to add lanes to the center portion of the roadway, or were not located near agricultural areas. The 100-ft existing roadway was excluded from geographic information systems (GIS) analysis under the assumption that no farmland impacts could occur within the right-of-way of an existing roadway.

The Modal Alternative, as defined in Chapter 2, would add one lane to each direction of travel to I-5, I-10, I-15, I-80, I-215, I-280, I-580, I-880, SR-14, SR-99, SR-152, and US-101. The Modal Alternative would also add two lanes to each direction of travel on I-5 through Los Angeles. A Caltrans standard lane width is 12 ft (3.65 m). Considering this, the study area was determined to extend from the edge of the existing right-of-way to 25 ft (8 m) on both sides of existing right-of-way. The 25-ft (8-m) distance is assumed to accommodate the added lanes with shoulders or other required additions. This approach is illustrated below in Figure 3.8-1.

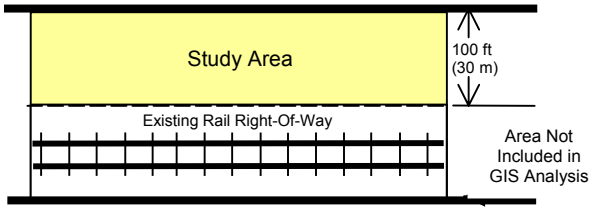
Figure 3.8-1
Modal Alternative Study Area (Highways)



Potential farmland impacts related to the Modal Alternative airport improvements were evaluated by applying the design footprint of the facility (e.g., runway) being improved over the FMMP GIS shapefiles and calculating the impacts on the FMMP-listed farmland. The study area for the region's airports included the land required to develop the proposed improvements to runways, taxiways, and terminals. This method assumed that the potential impact was limited to the geographic extent of area needed for the improvements only, with no extra area surrounding them.

High-Speed Train Alternative: The study area for the HST Alternative was developed to address two different potential improvement scenarios. The first scenario was for potential alignment options adjacent to existing rail corridors. In these cases, the study area extended 100 ft (30 m) from the rail right-of-way on the side that was selected for study by the California High Speed Rail Authority (Authority) and its regional study teams based on conceptual engineering studies. This allows the development of an estimate of the area that could be needed for a proposed HST system, and an estimate within that area of the land now in agricultural use that would potentially be affected. This approach is illustrated below in Figure 3.8-2.

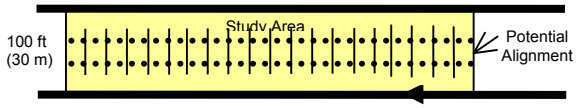
Figure 3.8-2
High-Speed Train Alternative Study Area
(in Existing Railway Areas)



This case represents a conservative approach to quantifying potential impacts, since it would be possible to fit the HST within a 50-ft (15-m) right-of-way in areas of high agricultural impact. Moreover, it may be possible to fit the entire HST line into existing rail corridors, given agreements with private rail operators. To the extent this could be done, it would reduce the potential impacts of the proposed HST Alternative to a nearly negligible level of impact on agricultural lands in existing railway areas.

The second scenario was developed for new alignments in undeveloped areas (i.e., areas outside the urban/metropolitan area that do not have existing rail rights-of-way) that are separate from existing rail corridors. In this scenario, the study area would extend 50 ft (15 m) on both sides of the proposed rail centerline, for a total width of 100 ft (30 m). This is a conservative approach because it would be possible to fit the HST line within a 50-ft (15-m) right-of-way in constrained areas. This approach is illustrated below in Figure 3.8-3.

Figure 3.8-3
High-Speed Train Alternative Study Area
(in Undeveloped Areas)



Analysis of Impacts

To ascertain the possible extent of potential farmland impacts, the Modal and HST Alternative study areas were overlain atop the FMMP farmland GIS shapefile. The GIS then calculated the acreage of farmland that would potentially be converted for the Modal Alternative improvements and the HST Alternative improvements in the study area for each of the FMMP categories. This analysis was performed for each region and used to calculate potential system-wide impacts on farmlands. This analysis accounts for proposed improvements that would expand existing transportation corridors, potential alignments that are adjacent to existing transportation corridors, and potential alignments that would traverse undeveloped areas. The station facilities that would be included within the proposed HST Alternative are assumed to be located primarily within the study areas considered.

Improvements associated with the Modal Alternative would consist of lane additions to existing roadways, as well as additional runways, gates, and associated improvements at existing airports. Considering this, the Modal Alternative identifies improvements for specific routes as part of the overall system-wide improvement alternative. The HST Alternative represents an alternative with various alignment options within each region. While potential impacts were estimated for each alignment option, the analysis for the HST Alternative was developed to

ascertain alignment combinations that would result in the least potential impacts on agricultural land per region (LPI) and alignment combinations that would result in the greatest potential impacts per region (GPI). Alignment combinations other than the LPI and GPI would be expected to have levels of impact between that of the LPI and GPI.

For purposes of this discussion, *farmland severance* is defined as the division of one farmland parcel into two or more areas of operation by the placement of a barrier (in this case rail line) through the parcel. Potential severance locations are discussed quantitatively, not qualitatively, in this program-level document. Parcel-specific information is also not considered in this program-level analysis. Project-level farmland conversion and severance impacts that are determined to be significant adverse impacts would be addressed in subsequent project-level documents.

3.8.2 Affected Environment

The locations of Modal Alternative and HST Alternative improvements in relation to the general locations of existing agricultural resources are shown in Figures 3.8-4A, 3.8-4B, 3.8-5A, and 3.8-5B.

A. STUDY AREA DEFINED

The study area for agricultural lands is defined above in Section 3.8.1 B.

B. GENERAL DISCUSSION OF AGRICULTURAL LANDS

California is the leading agricultural producer and exporter in the U.S. In 2001, California's agricultural production reached $27.6 billion, accounting for approximately 13% of the nation's gross cash receipts. The most recent statistics (2001) indicate that California has approximately 27.7 million acres (ac) (11.2 hectares [ha]) of land in farms, has approximately 88,000 farms (approximately 4% of the nation's total), and produces more than 350 different crop types. Although California has many areas of farmland production, its largest area of agricultural production is the Central Valley. Six out of the top ten California agricultural counties in 2001 were located in the Central Valley. (American Farmland Trust 2003, California Department of Food and Agriculture 2002.)

Urban growth frequently results in the conversion of agricultural land to non-agricultural uses. According to an estimate in a May 2001 report by the University of California Agricultural Issues Center, California lost approximately 497,000 ac (201,000 ha) of farmland by urbanization in the decade between 1988 and 1998, a loss rate of approximately 49,700 ac (20,100 ha) per year (Kuminoff, Sokolow, and Sumner 2001).

C. AGRICULTURAL LANDS BY REGION

Bay Area to Merced

This region includes central California from the San Francisco Bay Area (San Francisco and Oakland) south to the Santa Clara Valley and east across the Diablo Range to the Central Valley. The majority of FMMP-listed farmland in the Bay Area to Merced region is located in the eastern portion of the region at the west side of the Central Valley. A smaller amount of FMMP-listed farmland is located in the Santa Clara Valley between San Jose and Gilroy. These areas are mostly prime farmland; smaller areas of farmland of statewide importance and farmland of local importance are also present.

Modal Alternative: The existing roadways relevant to the Modal Alternative in this region are I-80, I-580, I-880, US-101, and SR-152. I-80 travels through farmland areas in the northeastern portion of the Central Valley. I-580 (at its eastern end) travels through farmland areas in the

northeastern portion of the Central Valley. I-880 travels through primarily urban areas in the eastern portion of the lower San Francisco Bay; agricultural uses are present but minimal along this roadway. US-101 travels through the agricultural areas in the southern portion of the Santa Clara Valley. SR-152 winds from the south portion of the Santa Clara Valley in an east-northeast direction to the Central Valley near the community of Los Banos. Agricultural lands along SR-152 are located in the southern portion of the Santa Clara Valley and on the eastern portion of the Central Valley.

High-Speed Train Alternative: HST Alternative alignment options in this region would begin at either San Francisco or Oakland, turn eastward at either San Jose (the Diablo Range direct alignment option) or Gilroy (the Pacheco Pass alignment option) and continue to Merced. There are negligible areas of farmland along these potential alignments between San Francisco and San Jose, and Oakland and San Jose. As indicated above, farmland in this region is primarily located in the eastern part of the region along the western areas of the Central Valley, and secondarily within the Santa Clara Valley south of San Jose. The mountainous topography along the Diablo Direct and Pacheco Pass alignment options between the Santa Clara and Central Valleys permits little agriculture besides grazing. However, grazing lands are not included in this program-level review. Grazing lands and other lands not included in the FMMP would be analyzed in the project-level review.

Sacramento to Bakersfield

This region of central California includes a large portion, approximately 75%, of the Central Valley (San Joaquin Valley) from Sacramento south to Bakersfield. The Central Valley is an active agricultural region. It contains some farmland in each of the FMMP-categories considered in this analysis. The largest FMMP farmland category represented in the Central Valley region is generally prime farmland, followed by farmland of statewide importance, then unique farmland, and, finally, farmland of local significance.

Modal Alternative: The existing roadways relevant to the Modal Alternative in this region are I-5, I-80, SR-99, and SR-152. Agricultural areas are located along the majority of the length of I-5 from Sacramento to Bakersfield. Although agricultural areas are apparent on aerial photos, the agricultural analysis is unable to ascertain agricultural impacts along I-5 in Fresno County because the FMMP has not recorded farmland for this area due to insufficient soils data. I-80 travels through the agricultural areas of the northeastern portion of the Central Valley. Like I-5, SR-99 runs through agricultural lands for the majority of its length, with minor exceptions near Fresno. SR-152 runs through areas of agriculture from I-5 to SR-99. However, agricultural uses along the Central Valley portion of SR-152 are somewhat interrupted in the area of Los Banos due to the presence of slough and pond areas. Under the Modal Alternative, the Sacramento to Bakersfield region would also include runway-related improvements to the Sacramento International Airport that would consist of lengthening Runways 1 and 2. These runways are adjacent to FMMP-listed farmland—primarily farmland of statewide importance—and some prime farmland.

High-Speed Train Alternative: Alignment options run primarily north-northwest to south-southeast adjacent to existing Union Pacific Railroad (UPRR) or Burlington Northern Santa Fe (BNSF) rail rights-of-way. There is more farmland along the BNSF corridor in this region than along the UPRR corridor. These corridors are compared below.

- Sacramento to Merced. The HST alignment options along the existing BNSF mainline corridor between Sacramento and Merced would be located within the existing Central California Traction (CCT) right-of-way from Sacramento to north of Stockton, on new alignment north of and through Stockton, and would be developed adjacent to the existing BNSF right-of-way between Stockton and Merced. The existing BNSF corridor along this length generally travels

through farmland areas on exclusive right of way, circumventing the urban areas. The HST alignment options along the existing UPRR corridor are adjacent to the existing UPRR right-of-way, and would travel through more urban areas than the alignment options along the BNSF corridor. The potential alignment would include a downtown station site within Stockton. However, high-speed service through Stockton's urban area would not be feasible. The existing tracks through Stockton would need to be improved to serve stopping trains, and express tracks bypassing Stockton's urban areas would need to be developed to facilitate high-speed travel around the Stockton area. These express tracks would traverse farmland areas. The potential Modesto express loop/bypass on the UPRR mainline would run on a new alignment that would pass through farmland areas.

- Merced to Fresno. HST alignment options along the existing BNSF corridor between Merced and Fresno would travel through more agricultural areas than the alignment options along the UPRR mainline. One of the alignment options along the BNSF corridor would include new potential alignments connecting to the UPRR corridor through downtown Fresno, which corresponds to the current rail consolidation plans in this area. The new alignment of the Merced bypass, on the BNSF corridor, would travel through farmland. The Merced bypass would traverse more farmland than would the portion of the BNSF corridor that it would bypass. Options have been defined for the Merced Station on the BNSF corridor or the Merced loop/bypass. The HST potential alignment options along the existing UPRR corridor would traverse more urban areas than those on the BNSF corridor.
- Fresno to Bakersfield. HST alignment options along the existing BNSF corridor between Fresno and Bakersfield would run on new alignments in the areas around Fresno, Hanford, and just north of Bakersfield, but would be developed adjacent to existing right-of-way for the majority of the segments between these cities. An express loop/bypass along with the mainline alignment would be required around Hanford due to the existing tight curves in the area. HST alignments along the existing UPRR corridor would travel through roughly the same amount of farmland as those along the BNSF corridor. The Fresno bypass would require the development of a new alignment through farmland on the outskirts of Fresno and would run through more farmland than the existing BNSF and UPRR corridors. (The existing BNSF and UPRR corridors travel through the urban area in Fresno.)

Bakersfield to Los Angeles

This region of southern California encompasses the southern portion of the Central Valley south of Bakersfield, the mountainous areas between the Central Valley and the Los Angeles basin, and the northern portion of the Los Angeles basin from Sylmar to downtown Los Angeles. FMMP-listed agricultural land in the region is located mainly around the Bakersfield area and is largely prime farmland and farmland of statewide importance.

Modal Alternative: The existing roadways relevant to the Modal Alternative in this region are I-5, SR-99, and SR-58. I-5 travels through the agricultural areas at points south and west of Bakersfield. These areas are not included in the FMMP database and are thus not included within this agricultural analysis. South of Bakersfield, where SR-99 merges with I-5, lay the foothills of the mountains south of the Central Valley, with fewer agricultural uses. Similar to I-5, SR-99 runs through agricultural lands south of Bakersfield. SR-58 travels through the agricultural areas south and east of Bakersfield.

High-Speed Train Alternative: The Bakersfield to Los Angeles region represents the transition from high agricultural use areas to urban areas. There is less agricultural land acreage within this area than in the Sacramento to Bakersfield region. From Bakersfield south there are two potential alignment options entering the Los Angeles area. The westernmost alignment would traverse the eastern portion of the Tehachapi Mountains, but would encounter farmland areas south of Bakersfield. The easternmost alignment would progress into the Palmdale/Lancaster

area and would encounter less farmland as it travels east out of Bakersfield. Within the Los Angeles area, these alignments would join in the Sylmar area.

Los Angeles to San Diego via Inland Empire
This region of southern California includes the eastern portion of the Los Angeles basin from downtown Los Angeles east to the Riverside and San Bernardino areas and south to San Diego generally along the I-215 and I-15 corridors. FMMP-listed farmland in the region is located mainly between Lake Elsinore and Escondido, and is largely farmland of local importance and, to a lesser extent, unique farmland.

Modal Alternative: The existing roadways relevant to the Modal Alternative in this region are I-15 and I-215. I-15 travels through the agricultural areas south of Lake Elsinore, continuing to Escondido. I-215 travels through fewer agricultural areas west of Lake Perris. Also under the Modal Alternative, the Los Angeles to San Diego inland region would include runway-related improvements to the Ontario International Airport that would consist of adding a third runway. The existing runways are adjacent to FMMP-listed prime farmland.

High-Speed Train Alternative: The proposed alignment and station options in this region would progress eastward out of Los Angeles to San Bernardino and would then continue south to San Diego, encountering most of the regional farmland areas between Lake Elsinore and Escondido.

Los Angeles to San Diego via Orange County
This region includes the western portion of the Los Angeles basin between downtown Los Angeles and Los Angeles International Airport (LAX) and the coastal areas of southern California between Los Angeles and San Diego, generally following the existing Los Angeles to San Diego via Orange County (LOSSAN) rail corridor. There is relatively little FMMP-listed agricultural land in the LOSSAN coastal region, and it is located between Santa Ana and Irvine, and around Oceanside. The farmland between Santa Ana and Irvine is mostly prime farmland, with a smaller area of unique farmland. The farmland around Oceanside is entirely farmland of local importance.

Modal Alternative: The existing roadway relevant to the Modal Alternative in this region is I-5, which travels through the agricultural areas south of Santa Ana, continuing to San Diego. FMMP-listed agricultural land along the I-5 is limited and is located between Santa Ana and Irvine, and around Oceanside. The farmland along I-5 between Santa Ana and Irvine is mostly prime farmland, with a smaller area of unique farmland. The farmland along I-5 near Oceanside is entirely farmland of local importance.

High-Speed Train Alternative: Alignment options in the LOSSAN region would primarily run through the south portion of Los Angeles County and along the coastal areas of Orange and San Diego Counties. An alignment would also run from the central Los Angeles area to LAX. Considering the high urbanization of Los Angeles County and the Southern California coastal region (with the exception of the U.S. Marine Corps base at Camp Pendleton), very limited areas of farmland are present. The agricultural areas along the LOSSAN alignments are primarily between Santa Ana and Irvine, and around Oceanside.

3.8.3 Environmental Consequences

A. EXISTING CONDITIONS COMPARED TO NO PROJECT ALTERNATIVE

The existing condition represents the No Project Alternative in the present and assumes the present transportation infrastructure is, and would continue to be, operational. As indicated earlier, California is presently losing farmland at a rate of 49,700 ac (20,100 ha) annually. This loss is primarily due to

urban development fueled by a number of factors, including population growth, housing prices and economics, and commuting patterns (Kuminoff, Sokolow, and Sumner 2001). These circumstances suggest that there would be fewer farmland and agricultural resource areas in the future baseline case.

The No Project Alternative assumes that additional transportation improvements unrelated to this project would be programmed, funded, and expected to be operational by 2020. Some of the potential impacts on farmland from these projects would be mitigated. The trend of agricultural land conversion to accommodate urban development is likely to continue. Based on the present rate of farmland loss within the state, upon full implementation of the No Project Alternative by 2020, it is anticipated that the state would have lost nearly an additional 845,000 ac (342,000 ha) of farmland to urban development. This would represent a loss of approximately 3% of the state's 27 million ac (11 million ha) of farmland. The transportation improvements under the No Project Alternative would contribute to less than 1% of the 845,000-ac (342,000-ha) loss, but precise estimates are not possible.

B. NO PROJECT ALTERNATIVE COMPARED TO MODAL AND HIGH-SPEED TRAIN ALTERNATIVES

The No Project Alternative primarily represents planned highway improvements, with relatively minor infrastructure development. Although some farmland acquisition and conversion would likely occur under the No Project Alternative, it would be less than under the Modal or HST Alternatives because projects included in the No Project Alternative are primarily programmatic and do not require use of farmland. Table 3.8-1 provides the quantified potential impact amounts per region for the Modal and HST Alternatives.

The Modal Alternative would not create additional alignments but would expand existing infrastructure. There are various alignment options for the HST Alternative in each region.

Table 3.8-1
Impacts on Potential System-wide Agricultural Land by Alternative[a,b,c]

Alternative	Region	Prime Farmland in ac (ha)	Unique Farmland in ac (ha)	Statewide Importance in ac (ha)	Local Importance in ac (ha)	Region Totals in ac (ha)
Modal Alternative	Bay Area to Merced	168 (68)	31 (13)	56 (23)	7 (3)	262 (106)
	Sacramento to Bakersfield	323 (131)	54 (22)	181 (73)	51 (21)	609 (246)
	Bakersfield to Los Angeles	1 (0.4)	0	1 (0.4)	0	2 (0.8)
	Los Angeles to San Diego via Inland Empire	106 (43)	1 (0.4)	3 (1)	107 (43)	217 (88)
	LOSSAN	15 (6)	4 (2)	1 (0.4)	8 (3)	28 (11)
Modal Alternative System-Wide Totals		**613 (248)**	**90 (36)**	**242 (98)**	**173 (70)**	**1,118 (452)**
HST Alternative (SWLPI)[c]	Bay Area to Merced	244 (99)	46 (19)	248 (100)	11 (4)	549 (222)
	Sacramento to Bakersfield	1,132 (458)	110 (45)	524 (212)	106 (43)	1,872 (758)
	Bakersfield to Los Angeles	0	0	0	0	0
	Los Angeles to San Diego via Inland Empire	7 (3)	0	0	17 (7)	24 (10)
	LOSSAN	0	0	0	0	0
HST Alternative (SWLPI)[c] Totals		**1,383 (560)**	**156 (63)**	**772 (312)**	**134 (54)**	**2,445 (989)**
HST Alternative (SWGPI)[c]	Bay Area to Merced	305 (123)	175 (71)	207 (84)	83 (34)	770 (312)
	Sacramento to Bakersfield	1,532 (620)	370 (150)	868 (351)	232 (94)	3,002 (1,215)
	Bakersfield to Los Angeles	62 (25)	0	1 (0.4)	0	63 (25)
	Los Angeles to San Diego via Inland Empire	8 (3)	0	1 (0.40)	16 (7)	25 (10)
	LOSSAN	0	0	0	0	0
HST Alternative (SWGPI)[c] Totals		**1,907 (772)**	**545 (221)**	**1,077 (436)**	**331 (134)**	**3,860 (1,562)**

[a] Alternative's system-wide totals for all agricultural categories shown in bold.

[b] The SWLPI and SWGPI potential impacts are based on the conservative assumption that the HST study area for agricultural lands would be 100 ft (30 m) wide in rural areas adjacent to existing rail rights-of-way. The 100-ft (30-m) width may be reduced to 50 ft (15 m) in areas of high agricultural impact, and may further be reduced to near negligible levels should right-of-way agreements be made with the existing rail operators.

[c] The HST Alternative system-wide alignment combinations with the lowest potential impact are denoted as SWLPI. The HST Alternative system-wide alignment combinations with the greatest potential impact are denoted as SWGPI. The amounts were determined by separately adding the impact amounts of the LPI and GPI alignment combinations per region for all five regions. This was done for each FMMP category.

The results of the comparative analysis, including each of the FMMP-listed farmland categories as well as the regional category totals for each of the alternatives, support the following conclusions.

- The Modal and HST Alternatives each would result in potentially greater impacts on farmland than the No Project Alternative, with the highest potential impacts being attributable to the proposed HST Alternative system-wide alignment combinations with the greatest potential impact (SWGPI).
- Compared to the Modal Alternative, the HST Alternative would result in potentially greater impacts on farmland in two out of five regions (Sacramento to Bakersfield and Bay Area to Merced), similar impacts in one region (Bakersfield to Los Angeles), and fewer impacts in two regions (Los Angeles to San Diego via Inland Empire and LOSSAN).
- The regions with the greatest potential impacts on farmland and agricultural lands are the Bay Area to Merced and Sacramento to Bakersfield regions.
- The HST Alternative system-wide alignment combinations with the lowest potential impacts on farmland (SWLPI) would exceed the potential impacts on farmland resulting from the No Project and Modal Alternatives by 2,445 ac and 1,327 ac (989 ha and 537 ha), respectively.
- The HST Alternative SWGPI would exceed the No Project and Modal Alternatives by 3,860 ac and 2,742 ac (1,562 ha and 1,110 ha), respectively.
- The HST Alternative SWLPI could generate fewer impacts than the Modal Alternative within the farmland of local importance FMMP category.
- The HST right-of-way width could potentially be reduced to 50 ft (15 m) in the areas of impact. This reduction would reduce the HST level of impact and reduce potential differences in impacts between the HST and Modal Alternatives. The HST alignment options could fit into existing rail rights-of-way in constrained areas if agreements could be reached with existing owners/operators. This approach would reduce the potential impacts of the HST Alternative on farmland in these areas to a nearly negligible level.
- Compared to the state's potential total or overall farmland loss of nearly 845,000 ac (342,000 ha) by 2020, the Modal, HST SWLPI, and HST SWGPI Alternatives would each represent less than 0.4% of the total potential farmland loss.
- For the HST Alternative, loops/bypasses and connections on new alignments would represent greater potential impacts on farmland due to severance than the alignment options within or adjacent to existing rail rights-of-way.

3.8.4 Comparison of Alternatives by Region

Table 3.8-1 above provides a synoptic comparison of the Modal and HST Alternatives, including range (LPI and GPI) of potential impact depending on the HST alignment combinations per region and system-wide. The key findings of the agricultural lands analysis by region for the Modal Alternative and HST Alternative alignment options are summarized below. Appendix 3.8-A provides tables that illustrate the amount of potential impacts associated with each HST alignment option by region.

A. BAY AREA TO MERCED

This region has the second highest concentration of farmland of the regions being studied. The HST Alternative (LPI and GPI) would have potentially higher impacts in all FMMP categories than the Modal Alternative. The total FMMP category acreage potentially impacted in this region would be 262 ac (106 ha) for the Modal Alternative, 549 ac (222 ha) for the HST Alternative LPI, and 770 ac (312 ha) for the HST Alternative GPI, thus indicating that the HST Alternative (LPI and GPI) would exceed the potential impact of the Modal Alternative by 287 ac and 508 ac (116 ac and 206 ha),

respectively. This would be added to impacts that may result from the No Project Alternative by 2020. Figures 3.8-6 and 3.8-7 show the locations of the Modal Alternative improvements and HST Alternative in the region.

Modal Alternative

Nearly all of the improvements under the Modal Alternative would be in areas containing existing roadway rights-of-way and runways. The agricultural impacts analysis included a review of existing roadways that could accommodate the development of one lane each way in the center median. The ability to add lanes to the center median reduces the requirement to acquire farmland for outside lane expansion, and thus reduces potential farmland impacts. The Modal Alternative improvements would be implemented on existing roadways in this region; no farmland parcels would be severed.

The roadways relevant to the Modal Alternative in this region are I-80, I-580, I-880, US-101, and SR-152. Considering the location of FMMP-listed farmland in this region and the ability to develop lanes in the center medians of the above-mentioned roadways, the areas of greatest potential impact would be primarily along SR-152 east of I-5, and secondarily along US-101 in the Santa Clara Valley. Possible roadway improvements in these areas could result in farmland impacts because they would require the acquisition of farmland adjacent to the roadway due to their apparent inability to accommodate the development of inside lanes.

The amount of farmland potentially impacted in the Bay Area to Merced region for the Modal Alternative would be 168 ac (68 ha) of prime farmland, 31 ac (13 ha) of unique farmland, 56 ac (23 ha) of farmland of statewide importance, and 7 ac (3 ha) of farmland of local importance. The Modal Alternative would potentially impact a total of 262 ac (106 ha) of farmland in this region.

High-Speed Train Alternative

This region includes potential alignment options that could extend southward from either San Francisco or Oakland to San Jose or Gilroy, and on to Merced. Farmland in this region is primarily in the east along the west margin of the Central Valley, and secondarily between San Jose and Gilroy. Farmlands are sparsely located in the San Francisco and Oakland urban areas.

The HST Alternative may benefit from being able to use existing rail rights-of-way. Configuration options of the HST Alternative, as indicated in the methodology subsection, include developing the HST alignment options within or adjacent to existing rail rights-of-way, or on new alignments. The development of the HST alignment options within or adjacent to existing rail rights-of-way would reduce the potential for farmland impacts from conversion, and significantly reduce severance-related farmland impacts. Both the Modal and HST Alternatives have this potential to reduce impacts on farmland.

High-Speed Train Alignment Option Comparison

Very little farmland is found in the San Francisco and Oakland urban areas. The Diablo Range direct and Pacheco Pass alignment options would connect the Bay Area to the Merced area. The Diablo Range direct alignment option would result in less potential for farmland impacts because it would travel through urban and mountainous areas and would not extend as far east into the Central Valley farmland areas as the Pacheco Pass.

There are two options for the potential Pacheco Pass alignment through the Gilroy area: through downtown Gilroy (Caltrain/Gilroy/Pacheco Pass) and bypassing Gilroy to the north (Morgan Hill/Caltrain/Pacheco Pass). The Morgan Hill/Caltrain/Pacheco Pass alignment option would result in potential impacts on 26 ac (11 ha) of farmland more than the Gilroy/Caltrain/Pacheco Pass

alignment option. This greater impact would be due primarily to the Gilroy/Caltrain/Pacheco Pass option being closer to suburban areas with fewer adjacent agricultural uses than the more agricultural areas of the Morgan Hill/Caltrain/Pacheco Pass. The LPI alignment combination in this region would use the Caltrain alignment from San Francisco to San Jose and the Diablo Range direct Northern Tunnel option from San Jose to Merced, potentially impacting a total of 549 ac (222 ha) of farmland. All of the 549 ac (222 ha) impacted would be located in the western part of the Central Valley at the east end of this alignment.

The GPI alignment combination in this region would use the Hayward/I-880 alignment from Oakland to San Jose and the Morgan Hill/Caltrain/Pacheco Pass alignment from San Jose to Merced. This alignment combination would potentially result in impacts on 770 ac (312 ha) of total farmland, which is approximately 221 ac (89 ha) more than the LPI alignment combination. Approximately 629 of the 770 ac (255 of the 312 ha) would be attributable to the farmland located in the western part of the Central Valley at the east end of this alignment which is mostly an agricultural area. See Appendix 3.8-A for potential impacts associated with each HST alignment option in all regions.

B. SACRAMENTO TO BAKERSFIELD

The Central Valley represents the most active agricultural region in California. Potential improvements to highways and airports, as well as new HST alignments and stations in the Sacramento to Bakersfield region, would generate the greatest potential for impacts on farmland of the regions analyzed. The HST Alternative (LPI and GPI) would have higher impacts in all FMMP categories than the Modal Alternative. The total FMMP category acreage potentially impacted in this region would be 609 ac (246 ha) for the Modal Alternative, 1,872 ac (758 ha) for the HST Alternative LPI, and 3,002 ac (1,215 ha) for the HST Alternative GPI, thus indicating that the HST Alternative LPI and GPI would exceed the potential impact of the Modal Alternative by 1,263 ac and 2,393 ac (511 ha and 968 ha), respectively. Figures 3.8-8A and 3.8-8B and 3.8-9A and 3.8-9B show the locations of the Modal Alternative and HST Alternative improvements in the region.

Modal Alternative

As with the Bay Area to Merced region, areas along existing roadways in the Sacramento to Bakersfield region that can accommodate an additional lane in each direction within the center median were assumed not to generate farmland impacts because acquisition and conversion of adjacent agricultural lands would not be required. Under this assumption, the number of acres of farmland impacted by roadway right-of-way acquisition for the Modal Alternative would be 287 ac (116 ha) of prime farmland, 43 ac (17 ha) of unique farmland, 124 ac (50 ha) of farmland of statewide importance, and 48 ac (19 ha) of farmland of local importance. Total roadway-related impacts on farmland under the Modal Alternative would be 502 ac (203 ha).

Airport-related improvements under this alternative would include the lengthening of Runways 1 and 2 at the Sacramento International Airport. These improvements would potentially impact 36 ac (15 ha) of prime farmland, 11 ac (4 ha) of unique farmland, 57 ac (23 ha) of farmland of statewide importance, and 3 ac (1 ha) of farmland of local importance. Total potential airport-related impacts on farmland under the Modal Alternative would be 107 ac (43 ha).

Collectively, the Modal Alternative improvements, roadway and airport, would potentially impact 323 ac (131 ha) of prime farmland, 54 ac (22 ha) of unique farmland, 181 ac (73 ha) of farmland of statewide importance, and 51 ac (21 ha) of farmland of local importance. The Modal Alternative would potentially impact a total of 609 ac (246 ha) of farmland in this region.

High-Speed Train Alternative

It is generally assumed that potential HST alignments in the Sacramento to Bakersfield region would be developed adjacent to existing UPRR or BNSF rail rights-of-way. In some segments, however, the alignment options are assumed to be within existing rights-of-way (e.g., CCT from Sacramento to Stockton). The GIS analyses accounted for these alignment areas. Some alignment options within the Sacramento to Bakersfield region, particularly the express loops/bypasses and connections between existing corridors, would require new alignments separate from existing rail corridors.

Farmland severance impacts (i.e., impacts from dividing parcels currently in agricultural use) would potentially result, in addition to farmland conversion. While the precise amount of farmland potentially severed by the HST alignment options cannot be ascertained at this level of study, the HST alignment options on new alignments traversing farmland areas would have the potential to sever the vast majority of parcels traversed due to the curving nature of the alignments.[1]

High-Speed Train Alternative Alignment Option Comparison

The area of highest potential impact in this region would be Stockton, followed by Fresno and the north portion of Bakersfield. Although there could potentially be alignments on new corridors in the Merced area, these alignments would not occur in farmland areas. The Sacramento to Bakersfield region also has several potential express loops/bypasses under consideration that are intended to circumvent the more congested urban areas, reduce costs, and reduce potential urban impacts such as noise. They are generally routed through the agricultural areas surrounding the urban areas, resulting in greater farmland conversion and severance-related impacts.

As shown below in Table 3.8-2, seven of the eight potential express loops in the region would have higher potential farmland impacts than the mainline alignments that they would bypass. Although express loops are shown separately, some areas may require the development of an express loop and mainline alignment. Such instances have been accounted for in this report's LPI and GPI alignment combinations analysis.

Table 3.8-2
Potential Farmland Impacts: Express Loops Compared to Mainlines

Alignment	Express Loop	Prime Farmland in ac (ha)	Unique Farmland in ac (ha)	Statewide Importance in ac (ha)	Local Importance in ac (ha)	Total Farmland in ac (ha)
Stockton to Modesto	Modesto loop	141 (57)	0	0	0	141 (57)
	Mainline	49 (20)	0	0	0	49 (20)
Modesto to Merced	Atwater Station loop	79 (32)	0	2 (0.8)	3 (1)	84 (34)
	Mainline	52 (21)	0	2 (0.8)	23 (9)	77 (31)
	Merced loop (BNSF)	45 (18)	9 (4)	72 (29)	5 (2)	131 (53)
	Mainline	35 (14)	1 (0.4)	23 (9)	7 (3)	66 (27)
	Merced loop (UPRR)	40 (16)	10 (4)	72 (29)	5 (2)	127 (51)
	Mainline	48 (19)	3 (1)	20 (8)	6 (2)	77 (31)

[1] Severance issues may arise in the Sacramento to Bakersfield region where the HST alignment options would bypass urban areas on new corridors traveling primarily north-northwest to south-southeast, and result in diagonally dividing a number of north-south oriented farmland parcels.

Alignment	Express Loop	Prime Farmland in ac (ha)	Unique Farmland in ac (ha)	Statewide Importance in ac (ha)	Local Importance in ac (ha)	Total Farmland in ac (ha)
Merced to Fresno	Fresno loop (BNSF)	149 (60)	76 (31)	63 (26)	5 (2)	293 (119)
	Mainline	70 (28)	23 (9)	32 (13)	9 (4)	134 (54)
	Fresno loop (UPRR)	131 (53)	44 (18)	42 (17)	7 (3)	224 (91)
	Mainline	3 (1)	0	11 (5)	1 (0.4)	15 (6)
Fresno to Tulare	Hanford Station loop	46 (19)	0	15 (6)	0	61 (25)
	Mainline	74 (30)	0	13 (5)	0	87 (35)
Tulare to Bakersfield	Tulare loop	103 (42)	3 (1)	12 (5)	1 (0.4)	119 (48)
	Mainline	60 (24)	2 (1)	13 (5)	0	75 (30)

Although more potential farmland conversion-related impacts would occur along the alignments of the proposed express loops than along the urban areas they would bypass, there would be the potential for severance-related impacts. These impacts are likely to occur as a result of the curvilinear nature and diagonal directions of travel of the express loops as compared to the more north-south orientation of the farmland parcels. For instance, a curved alignment through farmland has more potential to sever farmland than a straight alignment located along a road section or other linear feature.

Based on GIS analysis included in the related *System-Wide Agricultural Resources and Farmlands Report* (Parsons Brinkerhoff 2003), there would be consistently less agricultural land potentially impacted by the alignment options adjacent to the UPRR corridor than the BNSF corridor. Map observations and review of aerial photography reveal that the UPRR corridor runs parallel to SR-99. Much of the urban growth in the last 50 years in the Central Valley appears to have been around SR-99 (California Department of Transportation 2003). The nearby UPRR corridor would be in urban areas with correspondingly fewer agricultural severances or conversions. Potential HST alignment options adjacent to these corridors or sharing them would generate similar impacts on farmland. See Appendix 3.8-A for potential impacts associated with each HST alignment option in all regions.

C. BAKERSFIELD TO LOS ANGELES

The Bakersfield to Los Angeles region represents the transition from agricultural areas in the Central Valley to urbanized areas of Los Angeles. For the HST Alternative, the HST Alternative GPI would have the highest potential impacts in all FMMP categories (63 ac [25 ha]); the Modal Alternative and the HST Alternative LPI would have similar levels of impact, 2 ac (0.8) and 0 ac, respectively. Figures 3.8-10 and 3.8-11 show the locations of the Modal Alternative and HST Alternative improvements for the region.

Modal Alternative

Little farmland would be traversed by the potential Modal Alternative improvements in this region. The portions of the existing roadways that are able to accommodate an additional lane in each direction in the center median were assumed not to generate additional/new farmland impacts. The amount of farmland potentially impacted by the Modal Alternative in the region would be 1 ac (0.4 ha) of prime farmland and 1 ac (0.4 ha) of farmland of statewide importance. Based on these assumptions, the Modal Alternative would potentially impact a total of 2 ac (1 ha) of farmland in this region.

High-Speed Train Alternative

The FMMP database indicates that land uses along the Sylmar to Los Angeles alignment are all considered urban. Most of the farmland and agricultural resources in the region are south and east of the outskirts of Bakersfield. Little farmland would be traversed by the proposed HST Alternative alignment options in this region; there is virtually no farmland in the FMMP categories in the region.

High-Speed Train Alternative Alignment Option Comparison

The I-5 Union Avenue and Wheeler Ridge Road alignment options would traverse more farmland and thus would have the greatest potential impacts (63 ac [25 ha]) among the proposed HST alignment options. The LPI alignment combination would be the SR-58/Soledad Canyon alignment along the Bakersfield to Sylmar segment, and either the Metrolink/UPRR or combined I-5/UPRR portion along the Sylmar to Los Angeles segment. With implementation of this alignment combination, no farmland impacts would occur. The GPI alignment combination would be the Wheeler Ridge to I-5 alignment along the Bakersfield to Sylmar segment, and either the Metrolink/UPRR or combined I-5/UPRR portions along the Sylmar to Los Angeles segment. With implementation of this alignment combination, impacts on 63 ac (25 ha) of farmland would occur. See Appendix 3.8-A for potential impacts associated with each HST alignment option in all regions.

D. LOS ANGELES TO SAN DIEGO VIA INLAND EMPIRE

The Los Angeles to San Diego via Inland Empire region includes farmland areas located mainly along I-15 between Riverside and south of Escondido. The Modal Alternative would have more potential impacts in all FMMP categories than the HST Alternative LPI and GPI. The total FMMP category acreage potentially impacted in this region would be 217 ac (88 ha) for the Modal Alternative, 24 ac (10 ha) for the HST Alternative LPI, and 25 ac (10 ha) for the HST Alternative GPI, thus indicating that the Modal Alternative would exceed the potential impact of the HST Alternative LPI and GPI by 193 ac and 192 ac (78 ha), respectively. Figures 3.8-12 and 3.8-13 show the potential impacts of the Modal Alternative and HST Alternative in this region.

Modal Alternative

There is not space available to add lanes to the center medians of I-15 and I-215; thus additional right-of-way would be required in this region. The amount of farmland impacted by possible Modal Alternative roadway right-of-way acquisition would be 25 ac (10 ha) of prime farmland, 1 ac (0.4 ha) of unique farmland, 3 ac (1 ha) of farmland of statewide importance, and 107 ac (43 ha) of farmland of local importance. Total potential roadway-related impacts on farmland under the Modal Alternative would be 136 ac (55 ha).

Airport-related improvements under this alternative would include the addition of a third runway at the Ontario International Airport. Total potential airport-related impacts on farmland under the Modal Alternative would be 81 ac (33 ha), all of which would be prime farmland.

Collectively, the Modal Alternative improvements would potentially impact 106 ac (43 ha) of prime farmland, 1 ac (0.4 ha) of unique farmland, 3 ac (1 ha) of farmland of statewide importance, and 107 ac (43 ha) of farmland of local importance. The Modal Alternative would potentially impact a total of 217 ac (88 ha) of farmland in this region.

High-Speed Train Alternative

The Los Angeles to San Diego via Inland Empire region would travel eastward out of Los Angeles to San Bernardino and would then continue south from San Bernardino to San Diego. Most of the region's farmland and agricultural resource areas are located between Lake Elsinore and

Escondido, and portions of the farmland would potentially be impacted by the HST alignment options.

The LPI alignment combination would be the UPRR Colton Line alignment or UPRR Riverside/UPRR Colton Line alignment from the Los Angeles to March Air Reserve Base (ARB) segment to the San Jacinto to I-15 alignment, from the March ARB to Mira Mesa segment to any of the alignments in the Mira Mesa to San Diego segment. With implementation of this alignment combination, impacts on 24 ac (10 ha) of farmland would occur.

The GPI alignment combination would be the UPRR Colton Line to San Bernardino alignment from the Los Angeles to March ARB segment to the San Jacinto to I-15 Alignment, from the March Air Force Base to Mira Mesa segment to any of the alignments in the Mira Mesa to San Diego segment. With implementation of this alignment combination, impacts on 25 ac (10 ha) of farmland would occur. See Appendix 3.8-A for potential impacts associated with each HST alignment option in all regions.

E. LOS ANGELES TO SAN DIEGO VIA ORANGE COUNTY

The LOSSAN region includes only limited farmland areas located between Santa Ana and Irvine and near Oceanside. The Modal Alternative would have greater potential impacts in all FMMP categories than the HST Alternative LPI and GPI in this region. The total FMMP category acreage potentially impacted in this region would be 28 ac (11 ha) for the Modal Alternative, 0 ac for the HST Alternative LPI, and 0 ac for the HST Alternative GPI. Thus, the Modal Alternative would exceed the potential impact of the HST Alternative LPI and GPI by 28 ac (11 ha). Figures 3.8-14 and 3.8-15 show the locations of the Modal Alternative and HST Alternative improvements for the region.

Modal Alternative

FMMP-listed agricultural land in the LOSSAN coastal region, located between Santa Ana and Irvine and around Oceanside, is sparse. The farmland between Santa Ana and Irvine is mostly prime farmland, with a smaller area of unique farmland. The farmland around Oceanside is entirely farmland of local importance. Under the Modal Alternative, one northbound and one southbound lane would be added to I-5. However, I-5 in this region lacks sufficient width for additional lanes in the center median. Right-of-way would need to be acquired to develop added outside lanes. The amount of farmland the Modal Alternative would potentially impact in the LOSSAN region would be 15 ac (6 ha) of prime farmland, 4 ac (2 ha) of unique farmland, 1 ac (0.4 ha) of farmland of statewide importance, and 8 ac (3 ha) of farmland of local importance. The Modal Alternative would impact a total of 28 ac (11 ha) of farmland in this region.

High-Speed Train Alternative

The LOSSAN coastal region runs primarily along the southern California coastal areas through Los Angeles, Orange, and San Diego Counties. This region includes alignment options from central Los Angeles to LAX, and from the central Los Angeles area to San Diego. Alignment options throughout this region are being considered for HST and conventional trains. The existing UPRR Santa Ana Branch would be an HST alignment option. The existing LOSSAN alignment from Los Angeles to Irvine is being considered for shared HST and conventional passenger train service, or conventional passenger train service alone. South of Irvine, service is being considered for conventional train service only. The HST alignment options that would be developed within the existing LOSSAN corridor right-of-way would only require development of bypasses, and no farmland resources would be impacted. The HST alignment options would be developed within the existing LOSSAN corridor and would not generate bypass-related farmland impacts. No farmland impacts would occur within this region.

High-Speed Train Alternative Alignment Option Comparison

The HST alignment options that would be developed in the existing LOSSAN corridor right-of-way would only require development of bypasses; no farmland resources would be impacted. See Appendix 3.8-A for potential impacts associated with each HST alignment option in all regions.

3.8.5 Mitigation Strategies

Mitigation of potentially considerable impacts on farmland (i.e., by conversion to other uses) would be based first on avoidance. The strategy followed early in the conceptual design stage of the project was to avoid farmland wherever feasible. Throughout the initial screening of alternatives, a number of potential alignment options were eliminated due to the high potential for farmland impacts as well as other impacts (i.e., potential new alignments in the foothills of the Central Valley). Where potential impacts on farmland would occur, the effort would focus on reducing the potential impact. System-wide impacts would be reduced by sharing existing rail rights-of-way wherever feasible or by proposing development adjacent to them.

Site-specific impacts would need to be assessed and evaluated in a project-level document, and specific farmland mitigation strategies would be considered in a project-level document. Consideration of potential mitigation such as protection or preservation of off-site lands to mitigate conversion of farmlands or acquiring easements, or payment of an in-lieu fee as mitigation mechanisms, would depend on the potentially considerable environmental impacts identified at specific locations, as assessed in a project-level document. The feasibility of such mitigation strategies would have to be evaluated at the project-specific level and would depend on such factors as an assessment of the land under the state LESA model, the number of voluntary participants in local or regional programs, and the cost of acquiring easements. Possible mitigation strategies for severance impacts could include alternative access, realignment, or over-crossings at select locations. The feasibility of these, and possibly other mitigation strategies is uncertain and cannot be determined at the program level.

3.8.6 Subsequent Analysis

As indicated earlier, the above analysis does not provide a parcel-specific potential impact analysis for farmland. Subsequent project-level analysis would address local issues once the potential alignments are defined in more detail, assuming a decision is made to proceed with the HST Alternative. Subsequent project-level environmental documentation would include more detailed information on potential severance impacts insofar as it potentially impacts a working landscape, and on potential impacts on FMMP-listed farmland, farmland under Williamson Act contracts, and farmland easements.